

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

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- 5 LUG. 2004

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

06.07.2004

Applicant's or agent's file reference
Cal 85741

IMPORTANT NOTIFICATION

International application No.
PCT/EP 03/00746

International filing date (day/month/year)
28.01.2003

Priority date (day/month/year)
22.04.2002

Applicant
ENI S.P.A.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the International
preliminary examining authority:



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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference Cal 85741	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/00746	International filing date (<i>day/month/year</i>) 28.01.2003	Priority date (<i>day/month/year</i>) 22.04.2002
International Patent Classification (IPC) or both national classification and IPC E21B47/12		
Applicant ENI S.P.A.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

I	<input checked="" type="checkbox"/>	Basis of the opinion
II	<input type="checkbox"/>	Priority
III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	<input type="checkbox"/>	Lack of unity of invention
V	<input checked="" type="checkbox"/>	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	<input type="checkbox"/>	Certain documents cited
VII	<input type="checkbox"/>	Certain defects in the international application
VIII	<input type="checkbox"/>	Certain observations on the international application

Date of submission of the demand 05.11.2003	Date of completion of this report 06.07.2004
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 </div> </div>	Authorized Officer Dantine, P Telephone No. +31 70 340-3396 <div style="text-align: right;"> </div>

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/EP 03/00746**

I. Basis of the report

- 1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-19 as originally filed

Claims, Numbers

1-26 as originally filed

Claims, Pages

20, 20a, 22 received on 10.05.2004 with letter of 07.05.2004

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/EP 03/00746**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1,8,11,22
Inventive step (IS)	Yes: Claims	
	No: Claims	1,8,11,22
Industrial applicability (IA)	Yes: Claims	1,8,11,22
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP03/00746

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: GB-A-2 370 590 (XL TECHNOLOGY LTD ;TSL TECHNOLOGY LTD (GB)) 3 July 2002

After having checked the two priority documents, MI2002A000853 filed on 22/04/2002 and MI2002A002331 filed on 04/11/2002, it was determined by the ISA that D1 had to be considered as prior art as it is anticipating some subject-matter of the application disclosed in MI2002A002331 which was not disclosed in MI2002A000853 filed at an earlier date than publication date of D1.

The subject-matter concerns a passive vehicle with a head connector (fig. 4 & 6 in application) claimed in independent claims 1, 8, 11 and 22.

1) Document D1 discloses (the references in parentheses applying to this document):
(Fig. 18-25; page 12 line 28 - page 14 line 21)

A telemetry system for the bi-directional communication of data between a well point (1) and a surface terminal unit (page 9 line 26-28), which can be used inside drilling or production strings, comprising:

- data transmission and optional reception devices;
- a passive vehicle (133), moved by means of a deploying cable and a suitable unwinding device, consisting of
 - a winch (20; see fig.8/9) of the line to be unwound or pulled;
 - means for supplying electric energy to said vehicle (see page 11 line 7-9);
 - electronic control and communication devices;
 - anchoring devices (140) for guaranteeing safe stoppage inside the pipe.

the vehicle being connected, by means of a detachable deploying cable (146) and a hooking/unhooking device (142), to a suitable winding/unwinding device (145), which can be situated inside the possible garage or outside the string;

- a connection line (130), containing electric conductors, of the transmission and optional reception devices between a well point and its corresponding point situated inside the vehicle or on the surface.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP03/00746

The subject-matter of claim 1 is therefore not new (Article 33(2) PCT).

2) Document D1 discloses (the references in parentheses applying to this document):
(Fig. 6; page 11 line 5-14)

An active vehicle (50), capable of moving inside pipes for unwinding and pulling a connection line (see fig.6) containing electric conductors which allow transmission and optional reception of data, consisting of:

- a winch (see fig.8,9) of the line to be unwound or pulled;
- a head connector;
- means for supplying electric energy to said vehicle (see column 3 line 41);
- electronic control and communication devices (see page 11 line 7-9);
- locomotion devices (see fig.6) for the movement inside the pipe;
- anchoring devices (see fig.7) for guaranteeing safe stoppage inside the pipe.

The subject-matter of claim 8 is therefore not new (Article 33(2) PCT).

3) Following the same argumentation as in point 1) and 2) the subject-matter of claims 11 and 22 is also not new (Article 33(2) PCT).

CLAIMS

1) A telemetry system for the bi-directional communication of data between a well point and a surface terminal unit (A), which can be used inside drilling or production strings, comprising:

- data transmission and optional reception devices;
- an active vehicle (8), which can be equipped with various automation levels, ranging from purely tele-operated to completely autonomous, for unwinding and pulling a connection line, capable of moving inside the drilling or production string, or a passive vehicle (E), moved by means of a deploying cable and a suitable winding/unwinding device, consisting of • → INSERT PAGE 20A
- a connection line (9), containing electric conductors and/or one or more optical fibres, of the transmission and optional reception devices between a well point and its corresponding point situated inside the vehicle or on the surface.

2) The telemetry system according to claim 1, wherein, in the case of drilling strings, the well point for communicating data is the well bottom (B).

3) The telemetry system according to claims 1 and 2, wherein, in the case of drilling strings, there is also a "garage" (3) for housing the active vehicle (8)

- a winch (19) of the line to be unwound or pulled;
- means for supplying electric energy to said vehicle;
- electronic control and communication devices;
- anchoring devices (17) for guaranteeing safe stoppage inside the pipe.

the vehicle being connected, by means of a detachable deploying cable (G) and a hooking/unhooking device (F), to a suitable winding/unwinding device (D), which can be situated inside the possible garage or outside the string;

~~12) The vehicle according to claim 8 or 11, wherein the means for supplying electric power are batteries.~~

~~13) The vehicle according to claim 8 or 11, wherein the means for supplying electric power consist of the connection line itself (9).~~

~~14) The vehicle according to claim 8 or 11, which comprises a head connector (11) for connecting the vehicle itself to a garage for housing said vehicle.~~

~~15) The vehicle according to claim 8 or 11, which can also comprise:~~

- measurement and detection devices;
- transmitting devices of television and/or acoustic images;

~~• means for activating devices;~~

taining electric conductors and/or one or more optical fibres which allow the transmission and optional reception of data, consisting of:

- a winch (19) of the line to be unwound or pulled;
- a head connector (11);
- means for supplying electric energy to said vehicle (18);
- electronic control and communication devices (16);
- locomotion devices for the movement inside the pipe;
- anchoring devices (17) for guaranteeing safe stoppage inside the pipe.

9) The active vehicle according to claim 8, wherein the locomotion devices consist of a motor (12), suitable gears (13) and at least one wheel (14) which presses against the internal surface of the pipe and is forced by means of a spring (15).

10) The active vehicle according to any of the claims from 8 to 9, wherein said vehicle is equipped with various automation levels, ranging from purely tele-operated to completely autonomous.

11) A passive vehicle (E) for unwinding and pulling a connection line (9) containing electric conductors and/or one or more optical fibres which allow the transmission and optional reception of data, consisting of: